

Ex 22

## Blue Lake Campground – All American RV Resorts I, LLC Sequence of Site Impacts

5453 Blue Lake Road, Churubusco, Whitley County, Indiana

### Aerial Photography Reviewed:

1. April 6, 1998 (U.S. Geological Survey/Google Earth black and white image) – The image is of poor quality, but site features can be distinguished. This image predates the ownership of Brian Schaper and can be considered the ‘baseline’ from which any wetland or waters of the United States impacts will be calculated. The road configuration has a ‘South Drive’ (ending in a cul-de-sac), but no ‘Middle’, ‘North’, or ‘West’ Drives<sup>1</sup>. The ‘North-South’ access road leading to the west end of the campground ends in a cul-de-sac near the lakeshore. On the west, south and north sides of the cul-de-sac, the ground surface appears disturbed with mottled, and lighter colored tones – this may be consistent with probable development plans for locating trailers around it. To the west is a forested wetland and the probable line of disturbance is about 65 feet to the west of the cul-de-sac. Northwestward along the Blue Lake shoreline from the cul-de-sac is a small peninsula that serves as a ‘benchmark, i.e., a ground feature that can be located on subsequent aerial photographs. There are two ‘East-West’ drives that intersect with the ‘North-South’ access road further to the north – away from the lakeshore, i.e., two additional benchmarks.

The land area westward of the ‘South Dr.’ terminus is a peninsula of undeveloped land that contrasts with the wetland area immediately to the north and the lake to its south and is likely disturbed/filled ground given its mottled appearance (this is the future location of a gazebo).

A wetland area – denoted by black, possibly saturated soils, contrasting with adjoining developed areas or lighter colored ground surfaces, is located along the Blue Lake shoreline. The wetland bulges landward in a ‘thumb shape’ oriented to the northeast. The wetland is located between the ‘North-South’ access road and the ‘South Drive’. In addition, the orientation of the wetland ‘bulge’ points at a bend in the southernmost ‘East-West’ drive and is separated from it by approximately 56 feet (two trailers intervene within this space).

The dark toned wetland area has some disturbance in it. The wetland’s northmost flank abuts the ‘North-South’ access road’s cul-de-sac of its southeast end. This wetland flank also has a slight intrusion on its north edge from either a large trailer or building. There is a line of disturbance from this trailer/building south to the lakeshore that may be a pier or path. On this same flank, and emanating from the western of the aforementioned two trailers (between the ‘bulge’ and the southernmost ‘East-West’ access road), there appears a narrow light toned and straight line to the lakeshore. Nearer the lakeshore, and flanking this ‘path’, a box like structure is located and at the shoreline, a line of disturbance is apparent (this shoreline disturbance is in the same general location as the shoreline with broken concrete along it seen in 2012. Further,

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<sup>1</sup> EPA named these drives in 2012 for identity purposes and they are referenced here to compare change over time

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a narrow line of disturbance indicated by lighter tones (contrasting with the wetland's black tone) arises at the northwest shoreline of the aforementioned 'South Dr.' peninsula and extends approximately 336 feet northeastward - angling towards, but not reaching, the tip of the wetland 'bulge'. A short, similarly narrow line of disturbance, angles off of this 336 foot line of disturbance about 140 feet north of the point of origin. It leads northwest to the shoreline. From this location, there is a narrow line of disturbance north along the lakeshore for another approximately 53 feet.

Immediately to the east of the wetland area, and between the 'South Dr.' and the southernmost 'East-West' access road, the land area is undeveloped. Its lighter tone contrasts with the darker toned wetland area (this is the future location of 'West Dr.').

2. April 1, 2002 (U.S. Geological Survey/Google Earth color image) – This image has much better resolution than the 1998 image, i.e., vegetation and structures are more clearly defined. The area is largely unchanged from its 1998 condition, though the better quality photograph allows greater definition of ground images. On the north flank of the wetland area, and east of the 'North-South' access road, the line of disturbance previously defined (relative to the trailer/building) can be confirmed as a pier as it sits above the ground surface – this corroborates the area's description as a wetland. There is additional disturbance around the pier. At the pier end closest to the building, there is a narrow approximately 15 foot line of disturbance that diverges from the pier in a southwest direction. In addition, there are three (3) distinct objects about 15 feet east of the pier lined up north to south. Lastly, the vegetation is smooth textured and appears herbaceous compared to the much more mottled and criss-crossed appearance of the remaining wetland to the east, i.e., populated with shrubs and small trees.

The wetland boundaries are unchanged. The wetland 'bulge' remains about 56 feet from the southernmost 'East-west' access road. Along the 'path' noted in the 1998 photo that begins at the western trailer, two 19 foot by 8 foot rectangular structures – one in the water and one within the wetland area to the east of the access path – have replaced the single box shaped structure seen in 1998. There is a greater amount of disturbance in this location between the narrower shoreline disturbance seen in 1998 and the landed rectangular structure. This disturbance is consistent with people's desire to access the shoreline.

The 'South Drive' peninsula is clearly filled in this photo as it is mottled, lacking vegetation and consistently textured indicating grading of surface soils. Its size does not appear to have varied from that seen in 1998. The 336 foot line of disturbance from 1998 that emanates from this peninsula has grown over in vegetation. The short northwest trending disturbance line has also grown over in vegetation, though the shoreline disturbance seen in 1998 is still apparent, but has not changed in length.

3. July 12, 2003 (USDA-FSA/Google Earth color image) – This image is the digitized version of oblique photographs taken for Farm Bill compliance purposes and are taken in the growing season where tree canopies block much of the ground surface. Further, the photographic quality is limited and becomes pixilated when zooming in (a Google Earth feature). Major changes have occurred within the campground. The contemporary version of the road network is established in that the South, Middle, West and North Drives are in place. 'West' drive construction has intruded into the wetland approximately 6,165 square feet (0.14 acres). The south edge of the 'South' drive peninsula has a disturbance band along the shoreline west of the cul-de-sac. Further, two trees or shrubs have grown up on near the north edge of the 'South' drive peninsula – very near its border with wetlands. These two trees/shrubs were probably transplanted as they were not in evidence in the 2002 photo.
4. March 1, 2005 (IndianaMap Framework Data/Google Earth color image) – This is a leaf off photo with excellent resolution. Additional fill covering 0.04 acres has been placed south of the large trailer/building to the lakeshore. The 'path' from the aforementioned western trailer (between the wetland 'bulge' tip and the southernmost 'East-West' access road) is no longer visible, but previous disturbance close to the lakeshore is more visible and can be parsed from the surrounding wetland area. Otherwise, the northeast tip of the wetland 'bulge' and the wetland's north flank, excepting the fill noted above, are unchanged. The wetland edge is clearly definable by a change in vegetation and photo texture/color as contrasted with adjacent upland.
5. July 1, 2005 (USDA-FSA/Google Earth color image) – Photo quality is very poor and the photo is during the growing season where canopy coverage can obscure ground conditions. However, additional wetland fill stands out in the form of a linear access to the lakeshore from the westernmost outer curve of 'West' Dr. The fill area in wetlands is 2,666 square feet (0.06 acres). In addition, there is additional disturbance along the west edge of 'West' Dr. north of the previous fill in this area. The wetland fill totals 511 square feet (0.01 acres). Additional land disturbance is occurring at the 'North-South' access road. The road may be abandoned because the cul-de-sac area has been disturbed and the large trailer/building has been removed. Further land disturbances are very near or at the wetland's north flank immediately northeast of the former large trailer/building and at the wetland 'bulge' tip. The south edge of the 'South' Dr. peninsula also had additional land disturbance down to the shoreline and further west than seen in the July 2003 photo.
6. July 27, 2006 (USDA-FSA/Google Earth color image) – The photo quality is again poor with little definition of features. However, there is additional disturbance to the northeast of the former location of the large trailer/building. The disturbance encompasses approximately 810 square feet (0.02 acres).<sup>2</sup> The location of the 336 foot line of disturbance reflects a distinctly different vegetation signature compared to wetland areas to the west and east of it.
7. July 2, 2007 (USDA-FSA/Google Earth color image) – Another poor quality photograph with little definition. However, there is a small amount of additional disturbance along the wetland's

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<sup>2</sup> Measured polygons of wetland disturbance are slightly offset in this photo year compare to prior years. This 'offset' does not affect the measurement of the current year disturbance.

north flank – a little further northeast than the previous year. Approximately, 1,129 square feet (0.03 acres) have been disturbed/filled.

8. June 19, 2008 (USDA-FSA/Google Earth color image) – Photo quality is again poor and taken during the growing where the canopy can obscure ground features. A new road way has been constructed from the 'West Dr.' west to the old location of the 'North-South' road's cul-de-sac. A line of trailers is in place to the south of this new road. Adding trailers in this location has resulted in additional wetland disturbance/filling along the back end of these new trailers – further to the northeast of similar filling in this area from the 2006-07 images. Approximately 0.07 acres of the wetland 'bulge' has been filled in as well as areas contiguous to it to the southwest and southeast. Further filling/disturbance has taken place west of the 'West Dr.' from the wetland 'bulge' tip south of the 'South Dr.'s' peninsula. At the peninsula, a gazebo and access road have been built further impacting the wetland areas with fill material. Approximately 0.22 acres of additional fill has been placed to allow the gazebo access road construction as well as those areas of fill west of 'West Dr.'
9. June 20, 2010 (USDA-FSA/Google Earth color image) – This is a growing season image of medium quality. The major change in this image is the addition of disturbance/filling along the shoreline north of the 'North-South' access road's cul-de-sac (north of all previous disturbances). This area has room for four trailers, but only two appear to be in place. The disturbance/filling does not extend all the way to the shoreline, but is concentrated about 100 feet from the shoreline in a landward direction where an access road is located and further fill/disturbance is immediately adjacent on the waterward side. Approximately 0.16 acres of forested wetland fill/disturbance has occurred, though, the fill has not reached the lakeshore. However, three piers are located at the shoreline and project into the lake. Otherwise, the filling/disturbance west of 'West Dr.' appears wetter than filled areas to the south and east, i.e., the ground is darker.
10. June 1, 2011 (Google Earth color image) – This is a growing season image in which the canopy can obscure ground level features. The northmost fill along the shoreline has expanded by 0.26 acres and three trailers and two piers are in place. Another trailer space is available. Along the north flank of the wetland area, the photo quality allows the fill/disturbed area behind the trailers and the lakeshore to be delineated. Approximately 0.09 acres has been filled for lake access, lawn and fire pits. Additional fill has been placed at the wetland 'bulge'. Approximately 0.09 acres has been largely refilled since being filled in between 2007 and 2008. The area west of 'West Dr.', appearing wetter in 2010 than in 2008 (when first filled) now has standing water throughout.
11. September 13, 2011 site inspection – The Indiana Department of Environmental Management and the U.S. Army Corps of Engineers inspected Blue Lake Campground and confirmed additional fill material (including asphalt) was placed in the area west of 'West Dr.' (about 0.11 acres) and in the areas of the wetland 'bulge'. Fill areas were located with Global Positioning Systems in July 2012 by U.S. EPA after confirming wetland existed along the wetland's north flank. The area of wetland in which fill material was placed was then interpolated from the site GPS information and the March 1, 2005, aerial photograph whose resolution provided a distinct vegetative break between areas confirmed on-site as wetlands and uplands.



12. February 23<sup>rd</sup> and July 10, 2012 site inspections – The Corps, IDEM and U.S. EPA met on site with Brian Schaper/Blue Lake Campgrounds in February and walked the site with him while discussing the year to year Google Earth images. Further, in July, U.S. EPA and the Corps completed additional site evaluations. The fill within the area north of the former 'North-South' access road cul-de-sac and along the lakeshore was confirmed, i.e., it consisted of the access road, trailer parking areas, and lawn areas filled from the shoreline landward o the access road.

Total Fill Areas: 1.03 acres and 0.18 acres refilled

# All American RV Resorts I's Blue Lake Campground



# All-American Fill

02-03 0.14 (6,165 sq ft)

03-05 0.04

3/05-7/05 0.06 + 0.01 (511 sq ft)  
(2,665 sq ft)

7/05-7/06 0.02 (810 sq ft)

06-07 0.03 (1,129 sq ft)

07-08 0.09 + 0.24 = 0.33  
10,435 W of W Dr.  $\pi$

08-10 0.16 + 0.09

10-11 0.26 0.09 (refilled)  
in bridge

11-12 - 0.11 (refill)  
west of West Dr.

1.525

16 16 19 22 20 17"



180

18183 459 219X

Hwy 33

Blue  
LK  
Rd.

Rd

Wds

Currd

open

Spies

Blue  
LK

Rd



Hwy 33  
Rd

1991/92  
leaf on

NAPP 18183-  
1315

cleared  
level / consistent  
texture

Hwy 33

Blue  
Lk.

Rd

Rd

Prop line

wood

• = Bldg.

Access Rd

Maloney Drain

4 piers  
PSS + hand

6 piers

Blue  
Lk

rougher tex on west  
in cleared area

Rd.

Rd









6-20

1957

BFY-21-44

• cleared  
• path



Blue LK

PSS shows









7/27/06

7/2/07

6/19/08 - west is 29 below (includes east side road)

road to be below in 1998



6/1/11

4/6/98 7/1/02

7/13/03 - west side road/trailers gone (?)  
3/1/05 - " " " "  
7/1/05 - rd. crosses east side













Google Earth Pro

feet 400  
meters 100



175'







© 2012 Google

Google earth

Google Earth Pro

feet 300  
meters 100









Google earth

Google Earth Pro

feet  
meters









© 2012 Google

Google earth

Google Earth Pro

feet 400  
meters 100









Google Earth Pro

feet 400  
meters 100









Google earth

feet  
meters



F O.A.F.U  
post 6/1/11







Google Earth Pro

6/1/11

feet  
meters

1000  
300







5-31-11



Google earth

feet 400  
meters 100







Google Earth Pro

feet 200  
meters 70



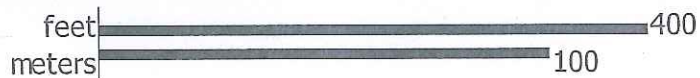






Google Earth Pro

feet  
meters









Google Earth Pro

feet  
meters

300

100



2011

$$0.09 + 0.26 = 0.35A$$

refill







Google Earth Pro

feet 300  
meters 100



2010

$$0.16 + 0.09 = 0.25A$$







Google earth

feet 500  
meters 100



2010







Google Earth Pro

feet 700  
meters 200

6.20-10









Google earth

feet | 500  
meters | 100



2008

$$0.09 + 0.11 = 0.20A$$





6/18/08



Image USDA Farm Service Agency  
© 2012 Google

Google earth

Google earth

feet 400  
meters 100









Google Earth Pro

feet  
meters 100 600



2007

0.03 A



7-1-07



Google earth

feet  
meters









Google Earth Pro

feet  
meters 100 600



2006

0.02A





7-26-06



Google earth

feet  
meters 100 500



Shows on '98 photo as  
bright color - probably  
fill





Google Earth Pro

feet  
meters |—————| 100 600



2005

$$0.06 + 0.01 = 0.07 A$$





6-30-05

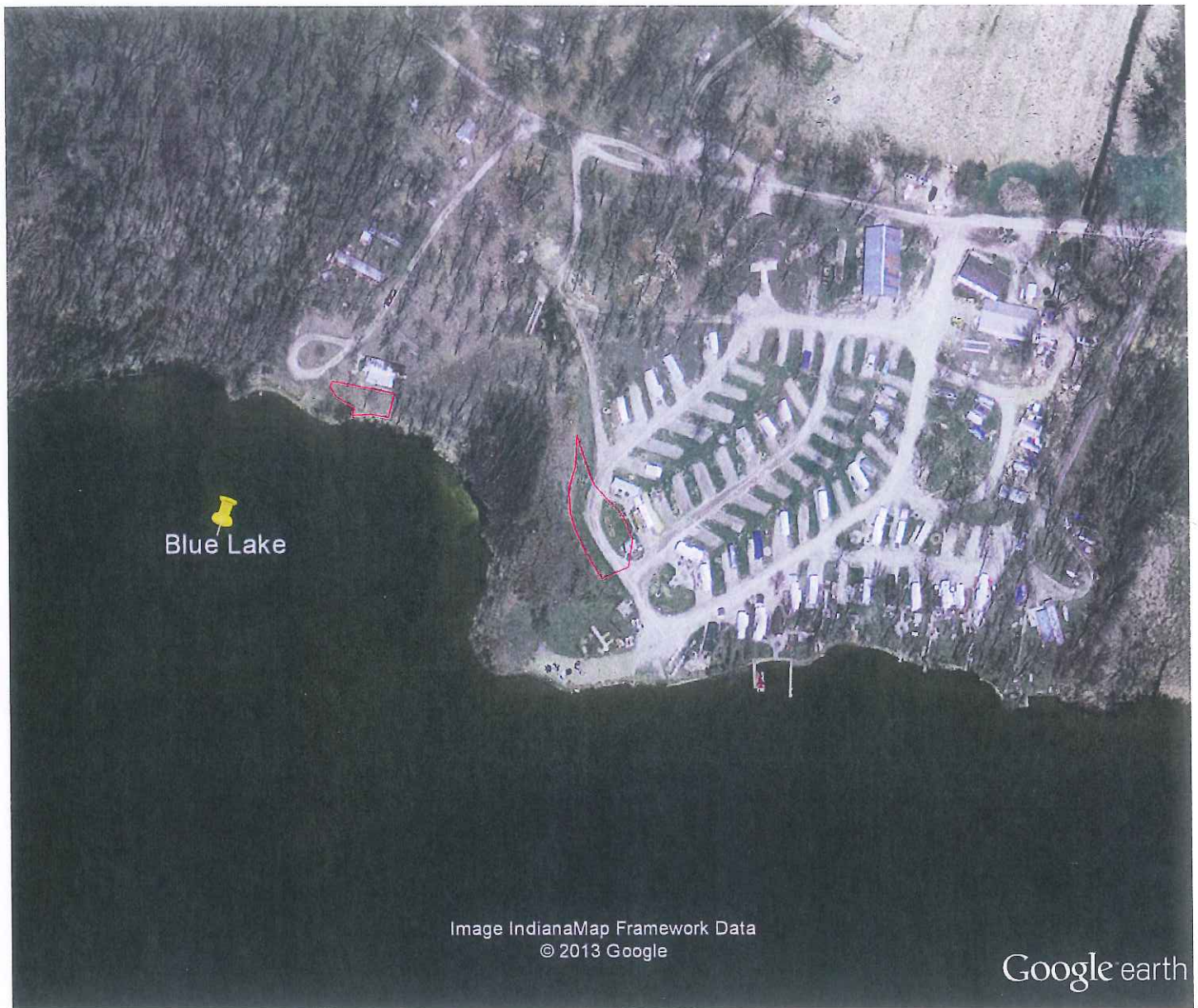


Google earth

feet |—————| 500  
meters |—————| 100







Google Earth Pro

feet  
meters |—————| 100 ————| 600



MR. 2005

0.04 A







Blue Lk

Image IndianaMap Framework Data

Google earth

Google Earth Pro

3/1/05

feet  
meters

1000  
300







2/28/05



Image IndianaMap Framework Data

Google earth

Google earth

feet  
meters









Google Earth Pro

feet 600  
meters 100



2003

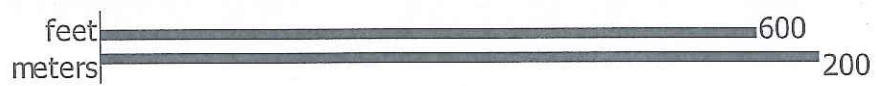
0.14 A



7-12-03



Google earth









Blue Lake

Image U.S. Geological Survey  
© 2013 Google

Google earth

Google Earth Pro

feet 600  
meters 100



2007





3/31/02



Blue Lk

Image U.S. Geological Survey

Google earth

Google earth

feet  
meters







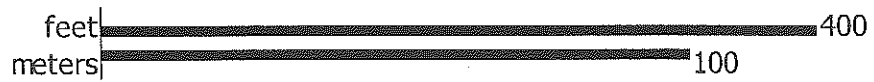
4-5-98



Image U.S. Geological Survey  
© 2012 Google

Google earth

Google earth

















2012









2102







2008











2002









2003





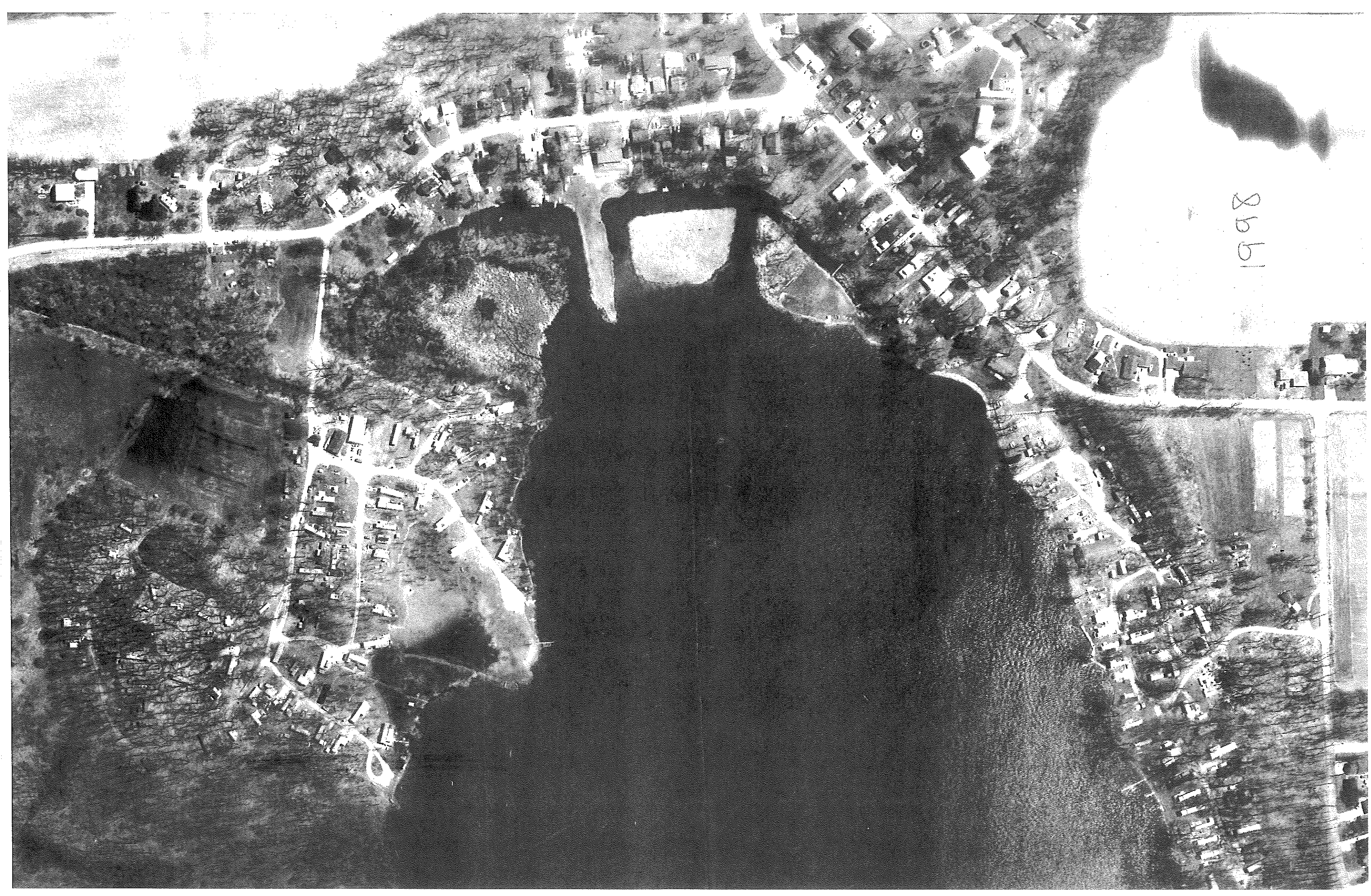












8661

















0861



